

## REMARKS

Claims 1-15 have been amended, and claims 16-19 have been cancelled. Thus, claims 1-15 are pending in the present application. The claim amendments are supported by the specification and claims as originally filed, with no new matter being added. Accordingly, favorable reconsideration of the pending claims is respectfully requested.

In claim 1, the term "for locking a hose in position relative to the hose clamp" has been introduced for the purposes of clarity. The claim comprises the combined features of original claims 1 and claim 10 as supported by page 5, lines 17 to 28 of the specification.

Claim 2 comprises the features as originally defined in claim 10 as supported by page 5, lines 17 to 28 of the specification.

Claim 3 comprises the features as originally defined in claim 9 as supported by page 6, lines 11 to 20 of the specification and Figures 1, 2, and 5.

Claim 4 comprises the feature of "a first female member" as supported by page 6, line 6 (female 18) of the specification and as shown in Figures 3 and 4. Claim 4 further comprises the features defined within original claim 3.

The term "universal base clamping mechanism" has been amended to "base clamping mechanism" for the purposes of clarity. This feature is that defined by the numeral 3 throughout the specification and is presented in detail within Figures 3 and 4.

Claim 5 defines the features of the second embodiment of the invention as presented in original claim 4, Figure 6 and described on page 7, line 25 to page 8, line 6 of the specification. A second female member has been introduced to the wording of the claim and refers to the feature defined by the numeral 24 both within Figure 6 and the specification.

Claim 6 defines the features as contained within original claim 5.

Claim 7 introduces further features of the hose coupling that allows it to perform the function as originally described in claims 17 and 18. Support for these features can be found within Figures 1, 2, and 5 and on page 5, lines 28 to 33 and page 8, lines 13 to 16 of the specification.

Claim 8 defines the mechanisms for locking the hose clamp about the vertical axis when employed with the base clamping mechanism. Support for this claim can be found within Figures 1 to 5, original claim 6, and on page 6, lines 11 to 20 of the specification.

Claim 9 defines the mechanism for locking the hose clamp about the vertical axis when employed with a portable independent frame. Support for this claim can be found within Figures 2 and 6, original claim 6, and on page 7, line 25 to page 8, line 6 of the specification.

Claim 10 defines the mechanism for locking the hose clamp about the horizontal axis when employed with either of the above embodiments. Support for this claim can be found within Figures 1, 2 and 5, original claims 17 and 18, and on page 7, lines 7 to 10 and page 8, lines 13 to 16 of the specification.

Claims 11 to 15 define the features defined within original claims 12 to 16.

1. Specification

The Office Action indicated that the term “Azimuth” in the specification should not be capitalized. Accordingly, the specification has been amended to make this change.

## 2. Claim Objections

Claims 7-11, 12 and 17-18 were objected to for lacking antecedent basis. Claims 7-12 have been amended to provide antecedent basis. As noted above, claims 17-18 have been cancelled. In addition, the term "Azimuth" has been removed from the claims.

The term "azimuth" as used in the present application refers to the movement of the handle as it moves from an unlocked position, where the handle is parallel to the associated stab pin, to a locked position, where the handle is substantially perpendicular to the stab pin.

The term "universal" when employed in relation to the "universal hose clamp" and the "universal hose locating mechanism" should be interpreted in accordance with the definition on page 7, line 22-23 of the specification namely, "the hose can be rotated to provide universal cover over  $4\pi$  steradians."

Accordingly, Applicant requests that the objection to the claims be withdrawn.

## 3. Rejections Under 35 U.S.C. § 112

Claims 1-18 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicant respectfully traverses.

It would appear that the rejection under 35 U.S.C. § 112, first paragraph, has arisen as a result of a misunderstanding as to the nature of the azimuth locking mechanism. The following is an explanation of the operation of the first and second mechanisms that is fully supported by the specification and drawings. The Examiner is referred to the specification in particular as follows:

- Page 5, lines 17 to 33;
- Page 6, lines 11 to 20 and Figures 1 to 5, in relation to the operation of the second locking mechanism with the base clamping mechanism 3;

- Page 7, line 25 to page 8 line 6, and Figures 2 and 6, in relation to the operation of the second locking mechanism with the tripod 23; and
- Page 6, lines 11 to 20, and Figures 1, 2, and 5, in relation to the operation of the first locking mechanism with the hose coupling 4.

Consider the second locking mechanism 10. With the handle 12 of the locking mechanism in the unlocked position, *i.e.* parallel to the associated stab pin 15, the stab pin 15 is located within the first 18 or second 24 female members, as appropriate. When the handle is moved to the locked position, *i.e.* perpendicular to the associated stab pin, the connection means 13 translates the associated stab pin downwards so as to engage a gear mechanism (of a type that would be known to those skilled in the art). In particular the gear mechanism comprises the first circular plate located at the top of the stab pin 15 and a second circular plate located at the base of the female member 18 to 24 that are positively biased when in the locked position. Therefore, when so engaged, the stab pin 15 is fixed within the female member 18 to 24 so preventing rotation or removal of the hose locating mechanism 2 relative to the base clamping mechanism 3.

The operation of the first locking mechanism is identical to that of the second, however, on this occasion the associated female (third female member) is shown in Figures 1, 2, and 5 as the area surrounding the horizontal stab pin 14. With the handle 12 parallel to the stab pin the hose coupling 11 is free to rotate, and even be removed from the stab pin 14. However, when the handle 12 is moved to the locked position, the associated gear mechanism is engaged to prevent rotation or removal of the hose coupling 11 relative to the hose locating mechanism 2.

Accordingly, Applicant respectfully requests that the rejection of the claims under 35 U.S.C. § 112, first paragraph, be withdrawn.

Claims 2-3 and 18 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicant respectfully traverses.

Claims 2-3 have been amended as indicated above, and claim 18 has been cancelled. Thus, Applicant respectfully requests that the rejection of the claims under 35 U.S.C. § 112, second paragraph, be withdrawn.

4. Rejections Under 35 U.S.C. §§ 102 and 103

Claims 1-3 have been rejected under 35 U.S.C. § 102(b) as being anticipated by GB Patent No. 2,326,082 to Giles (hereafter "*Giles*"). Claims 1, 4-6, 11-13, and 15-17 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,667,342 to Blaw (hereafter "*Blaw*"). Claim 14 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Blaw* in view of U.S. Patent No. 3,856,245 to Byerly (hereafter "*Byerly*"). Applicant respectfully traverses.

The cited prior art documents of *Giles* and *Blaw* both teach a means for mounting a hose. *Giles* describes apparatus that can be employed to attach the hose to parallel handrails while *Blaw* permits the hose to be attached to a tripod frame. However, neither of these documents teach or suggest an apparatus that permits unlimited rotation of the hose about a horizontal axis which can then be locked as required in the desired position. Therefore, amended claim 1 is not anticipated by the cited references. It follows that the rejected dependent claims are also not anticipated by the cited references because of their dependency on amended claim 1.

The problem addressed by the present invention is to provide a means for clamping a hose at a desired location so as to give maximum flexibility to the orientation of the hose while freeing up manpower so as to carry out further duties.

The incorporation of the first locking mechanism helps to achieve those aims while offering several technical advantages over the teachings of the prior art. Most significantly the

incorporation of the first locking mechanism provides a means whereby the hose can be rotated through 360° about a horizontal axis. This provides greater flexibility on the orientation of the hose such that when combined with the second locking mechanism the hose may be rotated to provide universal cover over  $4\pi$  steradians (page 7, lines 22-23 of the specification).

A further advantage of the first locking mechanism is that it provides a quick release mechanism for the hose coupling so that a second hose coupling assembly may be quickly interchanged when required. There is no need to undo a screw and bolt style fastening means as required with the prior art, merely the rotation of the handle of the first locking mechanism so as to move it to its unlocked position.

The problem addressed by the teachings of *Giles* is to provide a means of securing a fire hose to a pair of handrails 2 and 3. This is achieved through the employment of a fire hose support 1 that comprises a toggle clamp and a mounting member 10. *Giles* describes this as providing a sufficient degree of freedom of adjustment for a fire hose nozzle in one plane. However, experience has shown that fire can spread extremely quickly and it is often required to direct the hose directly behind the original field of direction. This can only be achieved with the apparatus described by *Giles* by release of the toggle clamp and relocating the whole apparatus on the opposite side of the handrails. This is both a more involved and time consuming process than that required by the present invention and significantly increases the level of danger to the user.

The problem addressed by the teachings of *Blaw* is to provide a portable fire nozzle support that can be adapted under various conditions of fire. In particular the apparatus described comprises a hose and nozzle support in the form of a tripod. Movement of the hose

about a horizontal axis is controlled by the combination of a clamp screw 25, a yoke 18, and a curved bar 24.

During fire fighting exercises, speed and mobility of the orientation of the hose is of the utmost importance. The teachings of *Blaw* are significantly more limited than those of the present invention.

For example, the degree of rotation of the hose about the horizontal axis is defined by the length of the curved bar 24. This provides a limited rotation in field of direction as defined by the setting of the tripod and does not allow the hose to be directed upwards or downwards. Furthermore, to release the hose for rotation purposes requires the loosening of the clamp screw 25. Such screws are known to become difficult to release if over tightened when originally deployed and can also become separated from the tripod when loosened. The occurrence of such events could be fatal to the user or any third party when the user is required to quickly re-deploy the orientation of the hose. In order to direct the hose in the field directly behind the original field of direction requires the loosening of a second clamping screw 20. This screw has the same disadvantages as described above in relation to the use of the first clamp screw 25.

As discussed above, *Giles* and *Blaw* provide different limited solutions to the same problem as solved by the teachings of the present invention. Both documents teach of only a limited degree of rotation for a hose about a horizontal axis and so it would not have been obvious to combine the teachings of these documents so as to arrive at the presently claimed invention. The *Byerly* reference does not cure the shortcomings of *Giles* and *Blaw*.

The present invention, as defined by the claims, provides a universal hose clamp that is more flexible than those devices described in the cited art. Where 360° rotation is known in relation to one axis (normally taken to be substantially vertical) it has not been disclosed that

such a feature is also available on a second, perpendicular axis (namely a substantially horizontal axis.

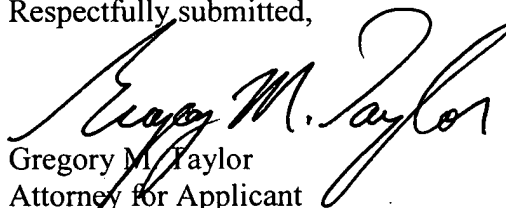
Accordingly, Applicant respectfully requests that the rejections of the claims under 35 U.S.C. §§ 102 and 103 be withdrawn.

#### CONCLUSION

In view of the foregoing, Applicant respectfully requests favorable reconsideration and allowance of the present claims. In the event there remains any impediment to allowance of the present application, which could be clarified in a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney.

Dated this 9<sup>th</sup> day of December 2003.

Respectfully submitted,



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